

Revisions of Genera in the *Asteron*-complex (Araneae: Zodariidae). *Asteron* Jocqué and the New Genus *Pseudasteron*

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ABSTRACT. The genus *Asteron* Jocqué is revised. It now contains 8 species: the type species *A. reticulatum* Jocqué and seven species here described as new: *A. biperforatum* n.sp., *A. grayi* n.sp., *A. hunti* n.sp., *A. inflatum* n.sp., *A. quintum* n.sp., *A. tasmaniense* n.sp. and *A. zabkai* n.sp. A key to the species is provided. The new genus *Pseudasteron* n.gen. is erected for a single new species *P. simile* n.sp.

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The genera treated in the present paper are part of the medium size, mainly tropical spider family Zodariidae which has its highest diversity in Africa and Australia. The majority of the Australian genera, and the entire *Asteron* complex are endemic to the continent. Very little is known about the biology of these taxa but it would seem that, like most other representatives of the family, these small spiders are adapted to semi-arid areas or to regions with at least a pronounced dry season.

This is the second of a series of papers that seeks to define generic limits within the *Asteron*-complex. Initially two species were described by Jocqué (1991) in the genus *Asteron*. Baehr & Jocqué (2000) explained the reasons why this complex group has to be split. The present paper delimits the genus *Asteron* and describes several new species in it. It also erects the new genus *Pseudasteron* which has many characters in common but clearly differs from *Asteron* by characters of the secondary genitalia.

Materials and methods

The format of the descriptions follows Jocqué & Baehr (1992). All measurements are in mm. Institutions from which material was borrowed are abbreviated as follows:

- AMS Australian Museum, Sydney (M. Gray)
- KBIN Koninklijk Belgisch Instituut voor Natuurwetenschappen (L. Baert)
- MV Museum Victoria, Melbourne (C. McPhee)
- QM Queensland Museum, Brisbane (R. Raven)
- USNM United States National Museum, Smithsonian Institute, Washington (J. Coddington)
- ZSM Zoologische Sammlung des Bayerischen Staates, München (B. Baehr)

Other abbreviations include: NP, National Park; Ra, [mountain] range; Rd, road; SF, State Forest.

Systematics

Genus *Asteron* Jocqué

Asteron Jocqué, 1991: 45.

Diagnosis. Representatives of this genus are recognised by the following combination of characters: the eyes in two strongly procurved rows, resulting in a (2–4–2) situation as the PLE are situated level with the PME; tibia of male palp with shallow retrolateral concavity delimited with apophyses; bulbus with remarkably large, folded VTA and short triangular apophysis at the base of the embolus; females with poorly sclerotized epigyne showing large copulatory ducts through cuticle; copulatory ducts with fairly constant curves, leading to widely separated, poorly delimited spermathecae; dorsal abdominal pattern with five white spots on a dark background.

Description. Small to medium-sized spiders (2.50–4.00) with slightly reticulated tegument. Carapace reticulated except between fovea and eyes (Fig. 5) at its widest at level of coxae II, narrowed to 0.65 maximum width in females, to about 0.55 maximum width in males. Profile domed with highest point between fovea and PME. *Colour:* carapace, chelicerae and sternum medium to chestnut brown; legs orange to brown; abdomen dark sepia with five pale spots. Eyes in two strongly procurved rows, resulting in (2–4–2) situation, PLE situated level with PME. All eyes subequal, circular, and pale, only AME dark. AME close together and about one radius from the PME which are slightly larger. ALE twice their diameter apart. MOQ longer than wide and slightly narrower in front than in the back. Clypeus slightly convex and retreating; about 4 times the diameter of an ALE; with few hairs. Chilum double with two rather broad and short sclerites slightly wider than long, without hairs.

Chelicerae with a few hairs in front and a dense row on distal promargin; no teeth. Labium narrowed at base; sparsely haired. Gnathocoxae rather elongate; sparsely haired; with anteromesal scopula. Sternum fairly flat, triangular with straight anterior margin and slight triangular extensions between coxae. Inter- and precoxal sclerites absent. *Legs:* formula 4 1 2 3. Spination: few spines on pairs I and II, more numerous on III and IV. Tarsal claws with approximately 14 teeth on those of first leg pairs, with only about 8 teeth on those of legs III and IV. Single claw on small onychium. Trichobothria in two rows on T and in a single row on Mt and t. Hinged hairs present on TI and II. Metatarsal preening brush poorly developed, composed of chisel-shaped hairs (Fig. 6). *Abdomen:* oval, with two sigilla; in the male with a narrow dorsal scutum in anterior half and with poorly developed epiandrum. Tracheal spiracle narrow with in front of it a poorly sclerotized, slightly bulging area. Trachea from the beginning divided in four fine tubuli. Spinnerets as usual in the family; posterior pairs smaller in males than in females. Colulus represented by few hairs. *Male palp:* tibia with a frontolateral concavity delimited by dorsolateral and ventrolateral apophyses; dorsal one usually flat, ventral one strong, directed forward. Embolus long, whip-shaped with large tooth-shaped, retrolateral apophysis at base, VTA large, folded; DTA membranous; LTA short, directed retrolaterad. *Epigyne:* fairly well sclerotized but showing copulatory ducts in transparency; copulatory ducts apparently short with fairly constant trajectory, leading to widely separated, poorly delimited spermathecae. *Female palp* with slender, conical tarsus with spines on prolateral and ventral sides. Finely dentate tarsal claw turned inward over $\pm 30^\circ$.

Distribution. Eastern Australia, including Tasmania.

Type species. *Asteron reticulatum* Jocqué 1991.

Key to the species of *Asteron*

- 1 males 2
- females 6
- 2 VTA with proximal, outwards curved hook (Figs. 17, 21) 3
- proximal part of VTA rounded, without hook (Figs. 15, 19, 23) 4
- 3 proximal hook of VTA double; dorsal tibial apophysis tooth-shaped, tiny (Figs. 21–22) *A. zabkai*
- proximal hook on VTA single; dorsal tibial apophysis large, bent down and forwards (Figs. 17–18) *A. tasmaniense*
- 4 dorsal tibial apophysis sharp (Figs. 16, 24) 5
- dorsal tibial apophysis blunt, indented (Fig. 20) *A. hunti*
- 5 dorsal tibial apophysis spine-shaped as seen in ventral and frontal views, strongly tapered in lateral view; LTA a short thick hook in ventral view (Fig. 16) *A. reticulatum*

- dorsolateral tibial apophysis large and ear-shaped as seen from in front, appearing as spine-shaped with parallel margins in lateral view; LTA with straight, sharp tip, pointing outwards in ventral view (Fig. 23) *A. grayi*
- 6 entrance with two large openings in posterior half of epigyne (Fig. 37) *A. biperforatum*
- entrance hardly visible on uncleared epigyne (Figs. 31, 33, 39) 7
- 7 epigyne with one very wide depression, as broad as the epigyne, behind central opening area (Fig. 35) *A. zabkai*
- epigyne without well marked depression (Fig. 27) 8
- 8 internal structure visible through cuticle not reaching posterior margin of epigyne (Figs. 25, 27) 9
- internal structure visible through cuticle reaching posterior margin of epigyne (Figs. 29, 31, 33, 39) 10
- 9 projection of copulatory duct in transparency forming an almost complete circle (Fig. 25) *A. reticulatum*
- projection of copulatory duct in transparency with a large interruption in front and dark circular areas aborally (Fig. 27) *A. tasmaniense*
- 10 posterior margin of epigyne straight or indented; central part of copulatory ducts straight 11
- posterior margin of epigyne convex; central part of copulatory ducts curved 12
- 11 posterior margin of epigyne slightly concave (Fig. 33) *A. quintum*
- posterior margin of epigyne straight (Fig. 31) *A. inflatum*
- 12 epigyne with diamond-shaped pale central area just in front of posterior margin (Fig. 39) *A. grayi*
- epigyne without diamond-shaped pale central area but with dark adjacent circular areas near posterior margin (Fig. 29) *A. hunti*

***Asteron reticulatum* Jocqué, 1991**

Figs. 1–4, 5–8, 13, 15–16, 27–28, 45

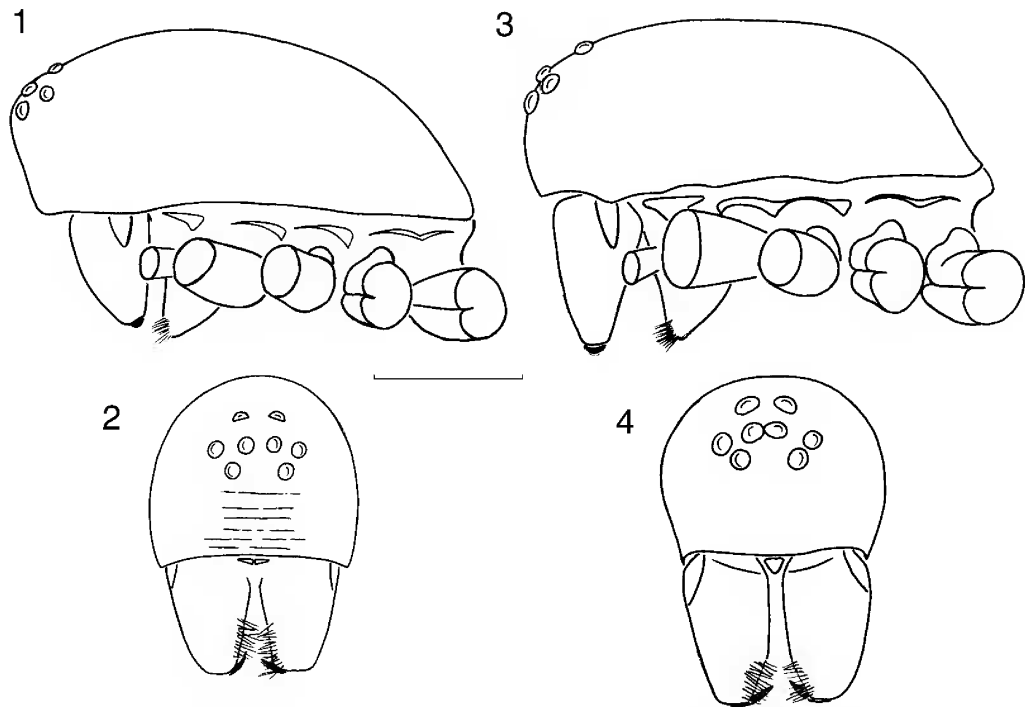
Asteron reticulatum Jocqué, 1991: 46 (descr. ♂ ♀).

Type material re-examined. HOLOTYPE ♂: Australia, New South Wales, Bondi SF, S of Bombala, woodlot 1, 37°08'S 149°09'E, 15.x.1980, G. Gowing *et al.* (AM KS11310); 1 ♂, Wiola Creek Fire Trail, Badja SF, 36°05'24"S 149°34'51"E, 13.iii.1999, J. Tarnawski, S. Lassau (AM KS55872); 1 ♂, Tuross River Rd, Badja SF, 36°12'17"S 149°30'07"E, 13.iii.1999, L. Wilkie, R. Harris, H. Smith (AM KS55880); 1 ♀, Badja SF Rd, Badja SF, 36°10'51"S 149°29'45"E, as previous (AM KS55883).

New material examined. VICTORIA: 1 ♂, site 513.04, Sardine Coupe, 37°25'S 148°31'E, 9–15.iv.1992, pitfall traps, upslope, R. Coy (MV K3802); 2 ♀ ♀, as previous (MV K3803); 1 ♀, 9–15.iv.1992, as previous (MV K3812); 1 ♀, 11–18.ii.1992,

midslope, as previous (MV K3806); 1 ♂, 18–25.ii.1992, as previous (MV K3820); 1 ♀, 1 juvenile, site 513.06, as previous, 11–18.ii.1992 (MV K3810); 1 ♀, 10–15.v.1992, gully, as previous (MV K3851); 4 ♂ ♂, 1 ♀, site 515.07, Rich-Murrungowar Coupe, 37°34'S 148°38'E, 29.x–6.xi.1991, pitfall traps, gully, R. Coy (MV K3815); 1 ♀, as previous (MV K3815); 1 ♂, site 509.08, as previous, 37°34'S 148°39'E, 2.x–5.xi.19912, midslope (MV K3795); 1 ♀, Upper Yarra Survey, site 6, 11.0 km NE McMahon Ck, 37°39'S 145°56'E, 14–24.xi.1988, L. Lumsden (MV K3766); 4 ♂ ♂, 3 ♀ ♀, Punchbowl, 41°27'S 147°10'E, 7.iv.1930, V. Hickman (AM KS30322); 2 ♂ ♂, 7 ♀ ♀, as previous, 28.v.1918 (AM KS30328).

Diagnosis. Males of this species are recognised by the shape of the tibial apophysis of which the sharp tip points downward (turned forward in *A. tasmaniense*); the tooth at the base of the embolus is fairly narrow and clearly concave along its prolateral side. Females can be recognised by the details of the epigyne in which the distal part of the copulatory



Figures 1–4. *Asteron reticulatum* Jocqué: 1, female carapace, profile; 2, eye region frontal view. *Pseudasteron simile* n.gen., n.sp.: 3, female carapace, profile; 4, eye region frontal view. Scale = 0.5 mm.

ducts almost completely encircle the proximal part.

Description. *Male*: total length 2.72; carapace 1.54 long, 1.01 wide, patella I+tibia I 1.13. *Colour*: carapace dark chestnut brown; chelicerae medium brown; sternum reddish brown; legs medium brown with femora distinctly darker than remainder of legs. Abdomen: dorsum dark sepia with five white spots: one pair in front, one pair in the middle and a single spot in front of the spinnerets; sides dark; venter with a longitudinal pale patch behind the epigastric fold, and a big white spot on either side, half way between spinnerets and epigastric fold. *Eyes* (measurements in mm): a, 0.07; b, 0.08; c, 0.07; d, 0.09; e, 0.01; f, 0.04; g, 0.04; h, 0.10; AL–AL, 0.12. MOQ:AW = 0.78 PW, AW = 0.60 L. Clypeus 0.32 high, slightly convex. *Leg spination*:

	F	P	T	Mt
I	d1	–	–	–
II	d1	–	–	v1
III	d1	pl1	pl2*d2*v1	4 disp dw5
IV	d2*	pl1rl1	pl2*d2*rl2*v3*	5 disp dw6

Male palp (Figs. 7, 8, 15, 16): tibia with sharp, downpointing dorsolateral and blunt ventrolateral apophysis delimiting dorsolateral concavity; embolus whip-like and twisted; big tooth at base with concave prolateral rim in ventral view; VTA massive and complex; DTA membranous: stalk thin, distal part widened with transverse distal appendage; LTA recurved in ventral view.

Female: total length 2.84 (2.84–3.42), carapace 1.66 (1.54–1.66) long, 1.05 (1.00–1.06) wide. *Colour*: very much as in the male but with a more reddish tinge all over; abdomen without scutum. *Eyes* as in the male. *Leg spination*:

	F	P	T	Mt
I	d1	–	–	–
II	d1	–	–	–
III	d1	pl1	pl2*d2*v1	5 disp dw4
IV	d2*	pl1rl1	pl2*d2*rl2*v2*	6 disp dw5

Epigyne (Figs. 13, 25, 26): rather simple: a sclerotized rectangular plate, strongly sclerotized along posterior margin, with a small central lip behind a tiny epigynal opening; opening slit-shaped; copulatory ducts visible through tegument: distal part (oral side) almost completely encircle proximal (caudal) part.

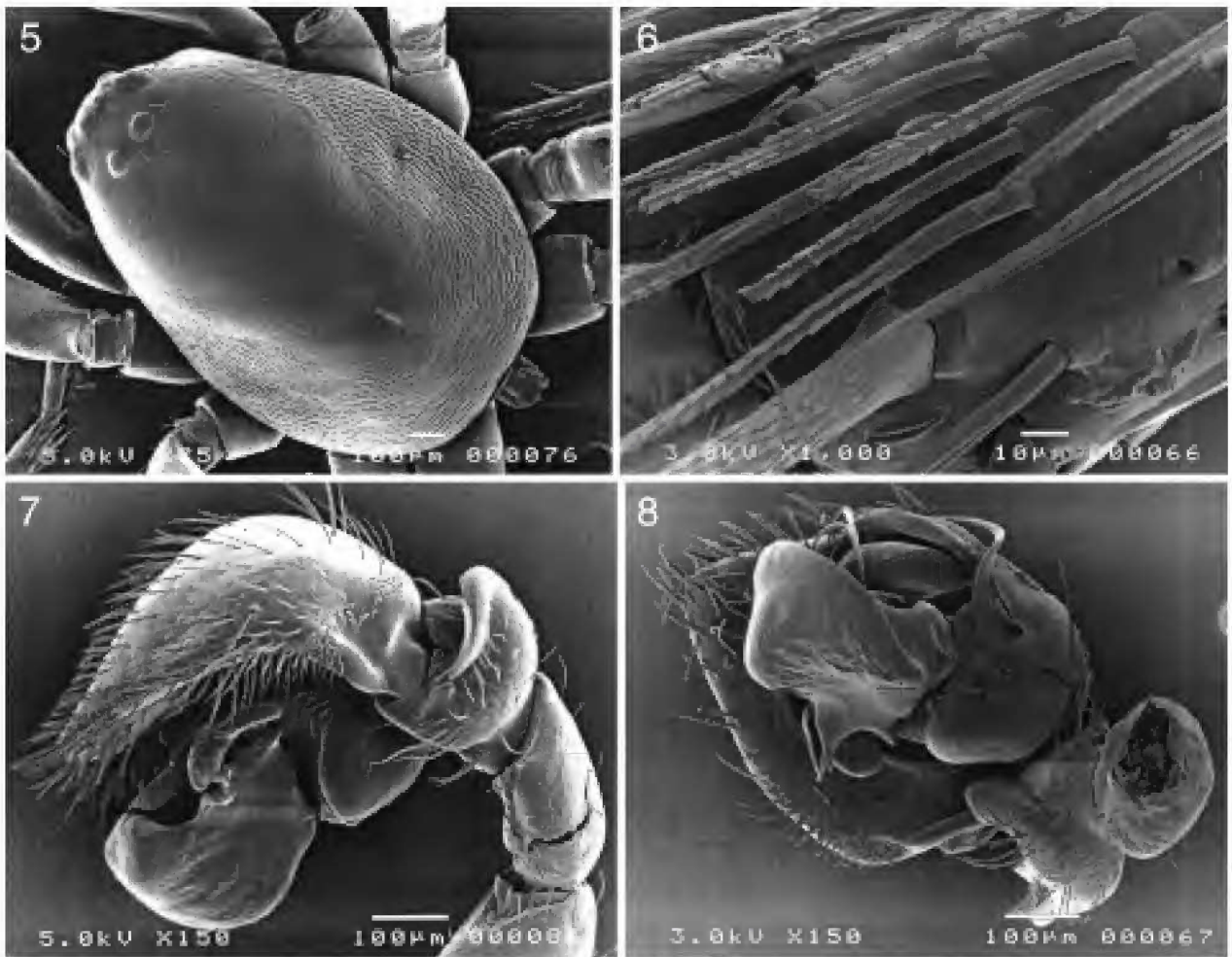
Variation. TL: 2.54–3.08, carapace length 1.42–1.58, width 0.94–1.02.

Distribution. New South Wales, Queensland (Fig. 45).

***Asteron tasmaniense* n.sp.**

Figs. 17, 18, 27, 28, 45

Type material. HOLOTYPE ♀: Tasmania, Domain, 42°53'S 147°19'E, 24.viii.1942, in cranberry tussocks, V. Hickman (AM KS30326). PARATYPES: Tasmania: 3 ♂♂, 6 ♀♀, same data as holotype; 2 ♂♂, 3 ♀♀, 3.viii.1968, as previous (AM KS30327); 2 ♀♀, 16.viii.1943, in grass tussocks, as previous (AM KS30336); 1 ♂, 1.ix.1934, as previous (AM KS30353); 1 ♀, v.1948, as previous (AM KS30337); 1 ♀, Trevallyn 41°27'S 147°10'E, 12.xi.1932, in grass tussocks, V. Hickman (AM KS30334); 2 ♀♀, 26.v.1928, in moss, as previous (AM KS30322); 1 ♀, Ridgeway, 42°56'S 147°17'E, 14.v.1948, C. Oke (AM KS30343); 1 ♂, Punchbowl, 41°27'S 147°10'E, 1.vi.1931, from moss, V. Hickman (AM KS30330).



Figures 5–8. *Asteron reticulatum* Jocqué: 5, female carapace, dorsal view; 6, chisel-shaped hairs of preening brush on MtIV; 7, male palp, retrolateral view; 8, male palp, ventral view.

Other material. None.

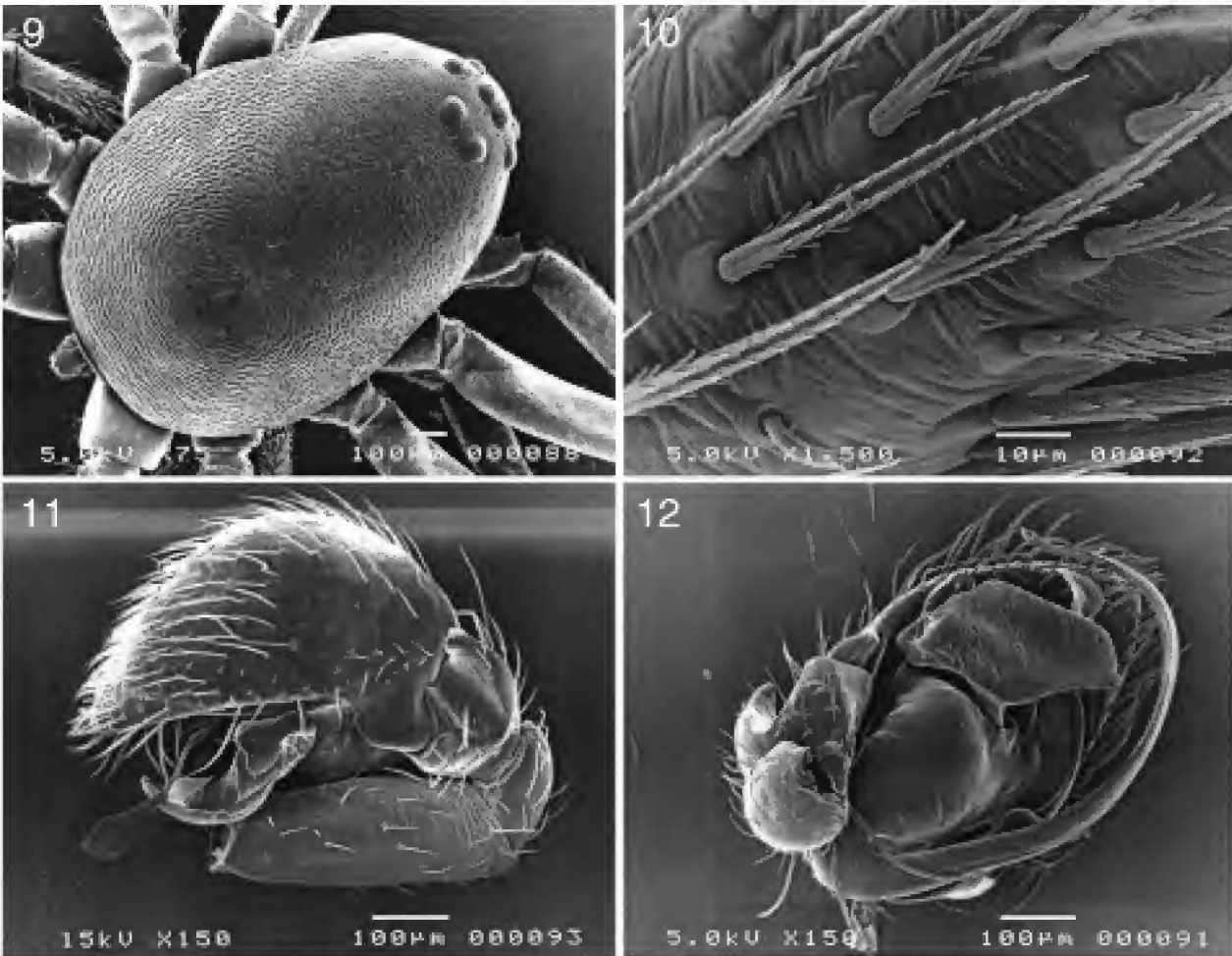
Diagnosis. Males of this species are recognised by the retrolateral tibial apophysis in which the dorsal prong is sharp and clearly curved forward. Females may be recognised by shape of the copulatory ducts in the epigyne: on either side, the oval outline of the copulatory ducts is widely interrupted in front.

Description. *Male* (paratype AM KS30326): total length 2.74; carapace 1.30 long, 0.92 wide; tibia+patella I 1.04. *Colour:* carapace, chelicerae and sternum uniform medium brown; sternum reddish brown; legs uniform yellowish brown; abdomen: dorsum dark sepia with five white spots: one pair in front, one pair in the middle and a single spot in front of the spinnerets; sides dark, with large ventrolateral white spot continuing on venter; venter with one poorly defined paler spot behind epigastric fold and yellow spot in front of spinnerets. Carapace finely reticulated. *Eyes* (measurements in mm): a, 0.06; b, 0.05; c, 0.06; d, 0.07; e, 0.02; f, 0.03; g, 0.06; h, 0.08; AL–AL, 0.12. MOQ:AW = 0.77 PW; AW = 0.63 L. *Leg spination:*

	F	P	T	Mt
I	d1	–	–	–
II	d1	–	–	v1
III	d1	pl1	pl2*d2*v1	2 disp dw5
IV	d2*	pl1rl1	pl2*d2*rl2*v3*	6 disp dw5

Hinged hairs: TI d1, TH d1. *Male palp* (Figs. 17, 18): tibia with retrolateral concavity, delimited by two apophyses: ventrolateral apophysis gutter-shaped with sharp, procurved proximal prong; ventrolateral apophyses blunt, produced under rim of cymbium; cymbium with flat flange delimited on dorsal side by thick ridge; embolus fairly long and twisted with large, embolar apophysis; VTA massive and complex; LTA spine-shaped; DTA membranous: root thin, distal part broad, rounded.

Female (holotype): total length 3.10; carapace 1.50 long, 0.94 wide; tibia+patella I 0.98. *Colour:* as in male except sides of abdomen with several oblique white patches and venter almost entirely pale but a faint large darker median band touching the yellow spot in front of the spinnerets. Carapace finely reticulated. *Eyes* (measurements in mm): a, 0.06; b, 0.06; c, 0.07; d, 0.07; e, 0.02; f, 0.04; g, 0.04; h, 0.09; AL–AL, 0.14. MOQ:AW = 0.77 PW; AW = 0.70 L. *Leg spination:*



Figures 9–12. *Pseudasteron simile* n.gen., n.sp.: 9, female carapace, dorsal view; 10, chisel-shaped hairs of preening brush on MtIV; 11, male palp, retrolateral view; 12, male palp, ventral view.

	F	P	T	Mt
I	d1	–	pl1	–
II	d1	–	–	v1
III	d1	pl1	pl2*d2*v1	2 disp dw5
IV	d2*	pl1rl1	pl2*d2*rl2*v2*	5 disp dw5

Hinged hairs: TI d1, TII d1. *Epigyne* (Figs. 27, 28): a poorly sclerotized oval area with strongly sclerotized posterior rim with pointed central tip; copulatory ducts showing through tegument have a roughly oval outline, widely interrupted in front. Delimitation of spermathecae unclear.

Variation. Colour pattern and spination very stable, extremities of leg joint sometimes somewhat paler: male carapace length and width vary between 1.40 and 1.24, 0.96 and 0.90; female carapace between 1.30 and 1.50, 0.86 and 0.96.

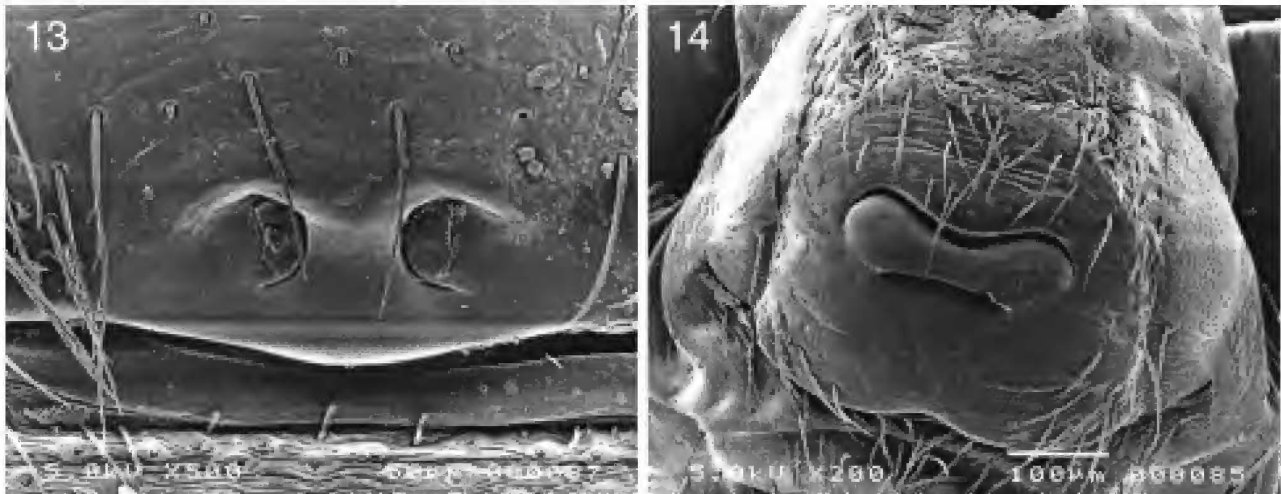
Distribution. Known only from southern Tasmania (Fig. 45).

Etymology. The species name is an adjective derived from the type locality of the species.

Asteron hunti n.sp.

Figs. 19, 20, 29, 30, 45

Type material. HOLOTYPE ♂: Australia, New South Wales, Abercrombie Caves, near Bushrangers Cave, 33°54'S 149°21'E, x.1989, G. Hunt (AM KS22479). PARATYPES: NEW SOUTH WALES: 1♂, Bungonia Caves area near Information Centre, 34°48'S 150°01'E, xi.1989, G. Hunt, (AM KS22563); 1♂, 1♀, x.1989, as previous (AM KS22581); 1♂, as previous (AM KS22582); 1♂, i.1990, as previous (AM KS22738); 2♂♂, 2♀♀, Kanangra-Boyd NP, Blood Filly Ck near Jenolan Caves, 33°51'S 150°03'E, 27.iii.1976, Gray, Hunt & McDougall (AM KS29874); 1♂, Royal NP, upper causeway ca. 100 m from road, 34°08'S 151°04'E, 12.iii.1991 (AM KS27891); 1♀, Munmorah State Rec., 33°12'26"S 151°34'37"E, 16.xii.1996, L. Wilkie (AM KS55947); 1♂, as previous (AM KS55920), 1♂, as previous (AM KS55926); 1♂, as previous (AM KS55971); 1♂, as previous (AM KS55985); 1♂, as previous (AM KS55996); 1♂, as previous (AM KS55999); 1♂, as previous (AM KS55978); 1♀, Myall Lakes NP, 32°34'45"S 142°17'27"E, 14.xi.1996, L. Wilkie (AM KS55967); 1♂, as previous, 32°37'56"S 152°12'27"E, 10.x.1997, L. Wilkie (AM KS55995); 1♂, Wyrabalong NP, 33°16'51"S 151°32'37"E, 23.v.1998, L. Wilkie (AM KS55062). AUSTRALIAN CAPITAL TERRITORY: 1♀, Brindabella Mountains, near Uriarra Ck, ca. 15 km W. Canberra, 6.viii.1990, 700 m, berlese, leaf litter from *Eucalyptus* forest, C. Griswold & T. Meikle (USNM).



Figures 13–14. Epigynes, ventral view. 13, *Asteron reticulatum* Jocqué. 14, *Pseudasteron simile* n.gen., n.sp.

Other material. None.

Diagnosis. Males of this species are recognised by the retrolateral tibial apophysis in which the dorsal prong is curved forward and slightly indented. Females may be recognised by shape of the copulatory ducts in the epigyne: on either side the oval outline of the copulatory ducts, visible through cuticle, is only slightly interrupted in front.

Description. *Male* (holotype): total length 2.90; carapace 1.40 long, 0.94 wide; tibia+patella I 0.96. *Colour:* carapace and chelicerae uniform orange brown; sternum reddish brown; legs uniform yellowish brown; abdominal pattern poorly defined: dorsum dark sepia with five white spots: one spot on either side adjacent with a narrow, pale yellow scutum, one pair in the middle and a single spot in front of the spinnerets; sides dark; venter with two large pale spots behind epigastric fold and yellow spot in front of spinnerets. Carapace and sternum with fairly coarse reticulations. *Eyes* (measurements in mm): a, 0.07; b, 0.06; c, 0.08; d, 0.08; e, 0.02; f, 0.02; g, 0.02; h, 0.06; AL–AL, 0.12. MOQ:AW = 0.88 PW; AW = 0.72 L. *Leg spination:*

	F	P	T	Mt
I	d1	–	pl1	–
II	d1	–	–	v1
III	d1	pl1	pl2*d2*v1	4 disp dw5
IV	d2*	pl1rl1	pl2*d2*rl2*v3*	5 disp dw5

Hinged hairs: TI d1, TII d1. *Male palp* (Figs. 19, 20): tibia with retrolateral concavity, delimited by two apophyses: ventrolateral apophysis pointing forward, blunt, produced under proximal part of cymbial flange; cymbium with flat flange; embolus fairly long and twisted with large, triangular basal apophysis, with clearly concave prolateral side; VTA massive and complex; LTA short, bifurcated: ventral part ridged, dorsal part spine-shaped; DTA membranous, roughly triangular: strongly widened from narrow base.

Female paratype: total length 3.78; carapace 1.48 long, 1.00 wide; tibia+patella I 1.04. *Colour:* as in male except legs with pale patellae and extremities of femora and tibiae; abdomen without scutum pale spots smaller than in male;

sides of abdomen with several oblique white patches and venter almost entirely pale but with two faint longitudinal darker median bands in front of posterior yellow spot. Carapace and sternum reticulated. *Eyes* (measurements in mm): a, 0.06; b, 0.08; c, 0.08; d, 0.10; e, 0.02; f, 0.04; g, 0.04; h, 0.09; AL–AL, 0.12. MOQ:AW = 0.70 PW; AW = 0.58 L. *Leg spination* and *hinged hairs* exactly as in male. *Epigyne* (Figs. 29, 30): a poorly sclerotized oval area with strongly sclerotized, accolade-shaped posterior rim; copulatory ducts showing through tegument have a roughly oval outline, slightly interrupted in front. Delimitation of spermathecae unclear.

Variation. Colour pattern and spination stable; male carapace length and width vary between 1.38 and 1.42, 0.92 and 0.96; female carapace between 1.40 and 1.48, 0.94 and 0.96.

Distribution. Known only from New South Wales (Fig. 45).

Etymology. The species name is a patronym in honour of the collector of the type.

Asteron inflatum n.sp.

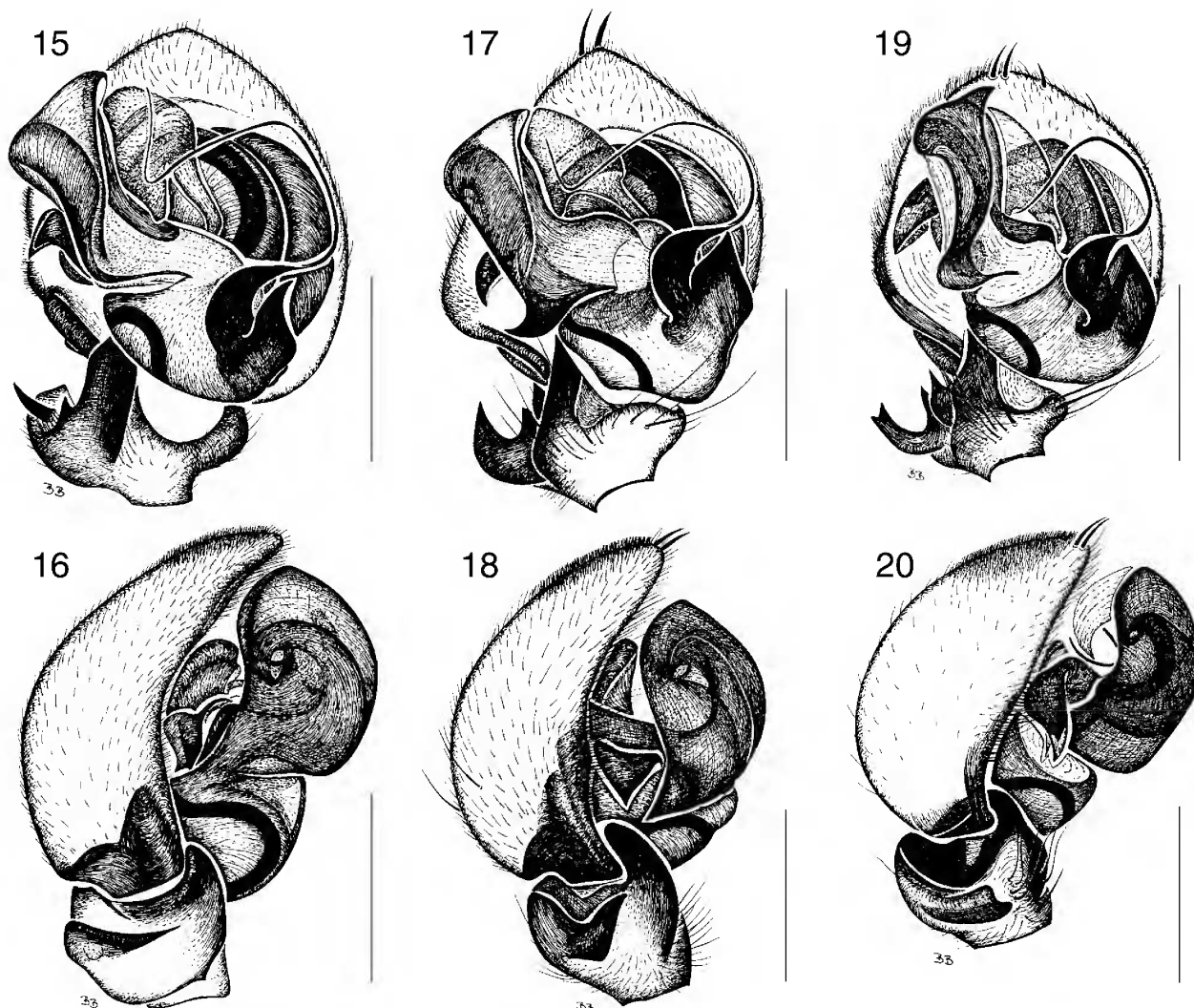
Figs. 31, 32, 45

Type material. HOLOTYPE ♀: Australia, Victoria, reserve, Dingley Road, 37°58'S 145°08'E, 10–13.i.1991, pitfall trap, S. Larwill (MV K3772).

Other material. None.

Diagnosis. Females of this species are recognised by the course of the copulatory ducts in the transparent cuticle of the epigyne: the mesal part of the ducts is straight whereas the lateral part is clearly looped which is not visible in the other species.

Description. *Female* (holotype): total length 3.96; carapace 1.56 long, 1.00 wide; tibia+patella I 1.02. *Colour:* carapace, chelicerae and sternum uniform orange brown; legs yellowish



Figures 15–20. Male palps, ventral view (top), lateral view (bottom). 15–16, *Asteron reticulatum* Jocqué; 17–18, *A. tasmaniense* n.sp.; 19–20, *A. huntii* n.sp. Scale = 0.25 mm.

brown with patellae and extremities of tibiae paler; abdomen: dorsum dark sepia with five white spots: one pair in front, one pair in the middle and a single spot in front of the spinnerets; sides dark with one large white spot continuing on venter and two oblique stripes near the back; venter pale with two narrow, interrupted longitudinal dark bands. Carapace and sternum finely reticulated. *Eyes* (measurements in mm): a, 0.05; b, 0.07; c, 0.07; d, 0.06; e, 0.02; f, 0.02; g, 0.05; h, 0.10; AL–AL, 0.14. MOQ:AW = 0.63 PW; AW = 0.60 L. *Clypeus* = 0.26 mm or 3.7 times diameter of ALE; chilum double, each part 0.06 high, 0.14 wide. *Leg spination*:

	F	P	T	Mt
I	d1	–	–	–
II	d1	–	–	v1
III	d1	pl1	pl2d2*v1	4 disp dw4
IV	d2*	pl1rl1	pl2*d2*rl2*v3*	5 disp dw4

Hinged hairs: TI d1, TII d1. *Epigyne* (Figs. 31, 32): poorly sclerotized oval area with slightly darker, straight posterior rim. Proximal part of copulatory ducts straight, distal part strongly sinuous and clearly looped ending in

well-delimited spermathecae.

Male unknown.

Distribution. Known only from type locality (Fig. 45).

Etymology. The species name is an adjective (Latin *inflatus* = swollen) and refers to the well delimited spermathecae.

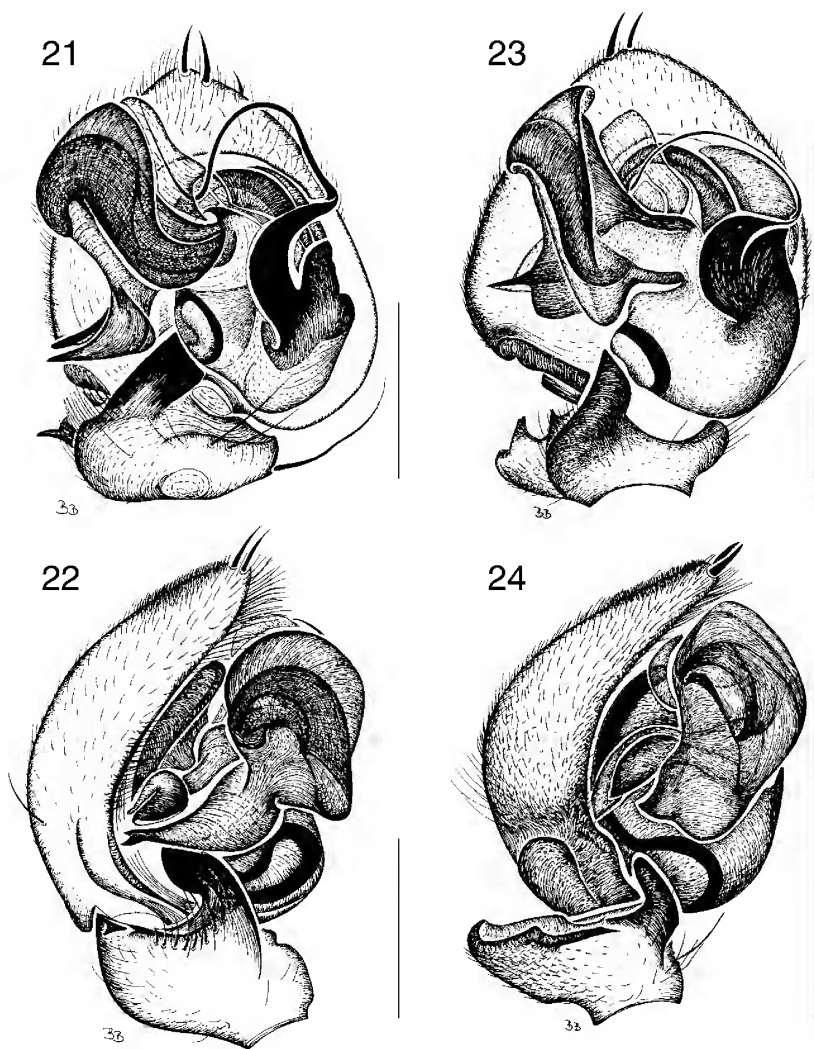
Asteron quintum n.sp.

Figs. 33, 34, 45

Type material. HOLOTYPE ♀: Australia, Victoria, Dartmouth Survey, Stoney Creek, 36°34'S 147°35'E, 13.ix.1973 (MV K3828).

Other material. None.

Diagnosis. Females of this species are recognised by the course of the copulatory ducts under the transparent cuticle: the mesal part of the ducts is straight whereas the lateral part is slightly sinuous and curved forward.



Figures 21–24. Male palps, ventral view (top), lateral view (bottom). 21–22, *A. zabkai* n.sp.; 23–24, *A. grayi* n.sp. Scale = 0.25 mm.

Description. *Female* (holotype): total length 2.88; carapace 1.48 long, 0.96 wide; tibia+patella I 0.96. *Colour:* carapace, chelicerae and sternum uniform orange brown; legs yellowish brown with patellae and extremities of tibiae paler; abdomen: dorsum dark sepia with five white spots: one pair in front, one pair in the middle and a single spot in front of the spinnerets; sides dark with three oblique stripes, the anterior one continuing into large white spot on venter. Venter pale with two fairly wide longitudinal dark bands. Carapace and sternum finely reticulated. *Eyes* (measurements in mm): a, 0.05; b, 0.08; c, 0.07; d, 0.06; e, 0.02; f, 0.02; g, 0.04; h, 0.08; AL–AL, 0.12. MOQ:AW = 0.66 PW; AW = 0.50 L. *Chypeus* = 0.22 mm or 2.7 times diameter of ALE; chilum double, each part 0.06 high, 0.14 wide. *Leg spination:*

	F	P	T	Mt
I	d1	–	pl1	–
II	d1	–	–	v1
III	d1	pl1	pl2*d2*v1	4 disp dw4
IV	d2*	pl1rl1	pl2*d2*rl2*v3*	5 disp dw4

Hinged hairs: TI d1, TII d1. *Epigyne* (Figs. 33, 34): poorly sclerotized oval area with slightly darker, sinuous posterior rim. Proximal part of copulatory ducts visible through cuticle almost straight, distal part strongly recurved and slightly procurved near anterior turn; ending in well-developed spermathecae.

Male unknown.

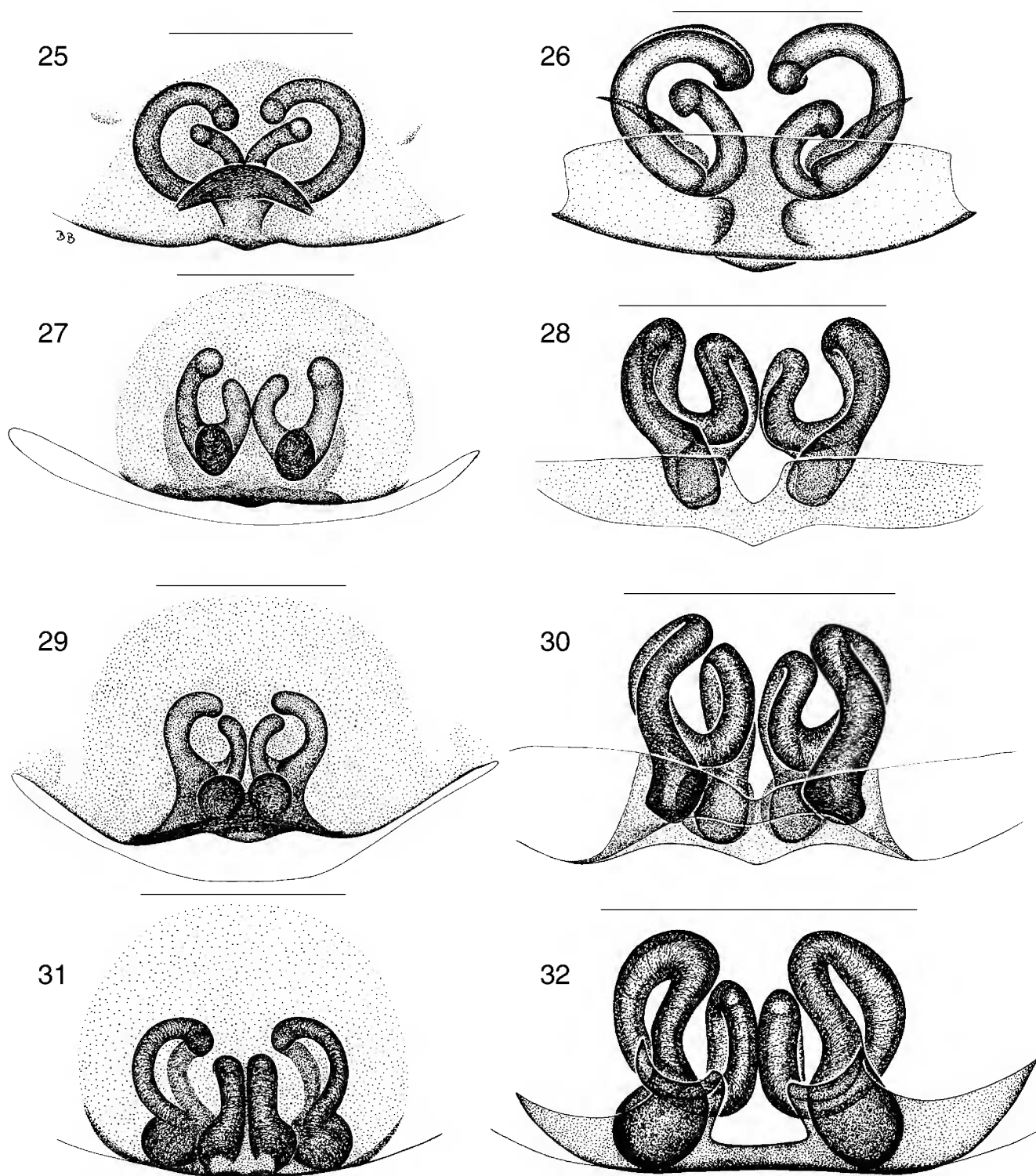
Distribution. Known only from type locality (Fig. 45).

Etymology. The species name is an adjective (Latin *quintus* = the fifth) as this is the fifth species described in *Asteron* s.str.

Asteron zabkai n.sp.

Figs. 21, 22, 35, 36, 45

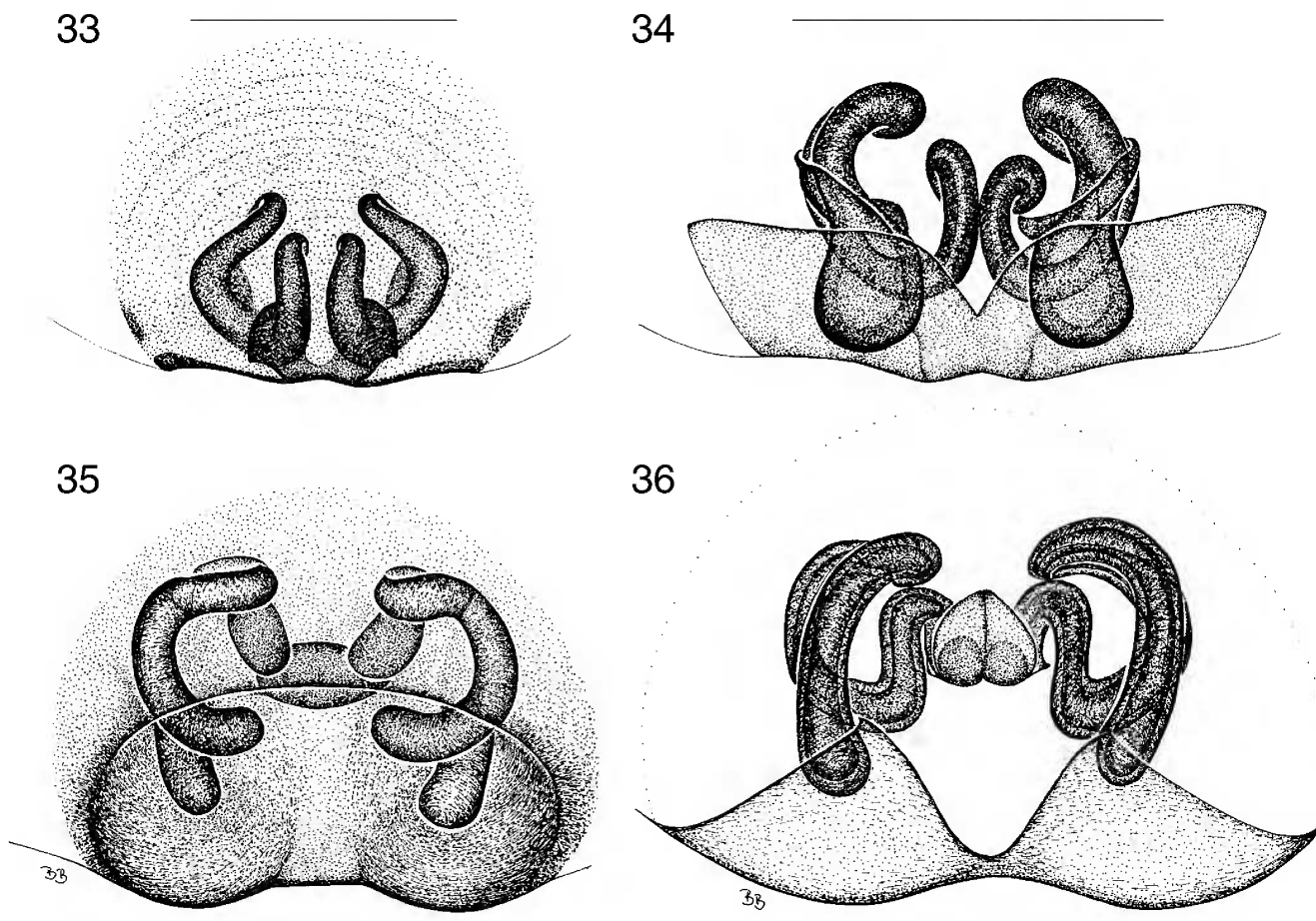
Type material. HOLOTYPE ♂: Australia, New South Wales, Royal NP, upper causeway, 34°08'S 151°04'E, 25.viii.1988, M. Zabka, C. Horseman & L. Sanchez (AM KS27938). PARATYPES: NEW SOUTH WALES: 1 ♂, Royal NP, upper causeway, ca. 100 m from road, 12.iii.1991, C. Horseman & B. Haren (AM KS27891); 1 ♀,



Figures 25–32. Epigynes, ventral view (left), dorsal view of cleared epigyne (right). 25–26, *Asteron reticulatum* Jocqué; 27–28, *A. tasmaniense* n.sp.; 29–30, *A. huntii* n.sp.; 31–32, *A. inflatum* n.sp. Scale = 0.25 mm.

Enfield SF, Dodds Fire Trail, about 3 km from Enfield Road, 910 m, 31°24'S 151°52'E, 4.ii–9.iv.1993, M. Gray & G. Cassis (AM KS039111); 1 ♀, as previous, about 2 km from Enfield Road, 930 m, 31°23'S 151°52'E (AM KS039109); 2 ♂♂, 4 ♀♀, Wahroonga Fox Valley, 17.xi.1979, B. Henke (AM KS5617); 7 ♂♂, 5 ♀♀, as previous (AM KS5593; 1 ♂, 1 ♀ in ZSM; 1 ♂, 1 ♀ in KBIN); 2 ♀♀,

Chichester SF, Mt Allyn Road, N of Shellbrook Forest Rd, 32°08'S 151°27'E, 770 m, 4.ii–9.iv.1993, M. Gray & G. Cassis (AM KS39141); 2 ♀♀, as previous, 2.3 km N of Kuruah R on Kuruah R Rd, 32°05'S 151°43'E, 520 m, NPWS Survey (AM KS039815); 3 ♀♀, as previous, 1.3 km N of Kuruah R on Kuruah R Rd, 32°05'S 151°43'E, 520 m NPWS Survey (AM KS039816); 1 ♀, as previous, 300 m off Mt



Figures 33–36. Epigynes, ventral view (left), dorsal view of cleared epigyne (right); 33–34, *A. quintum* n.sp.; 35–36, *A. zabkai* n.sp. Scales (mm) = 0.5 (33), 0.25 (34) and 0.1 (35, 36).

Allyn Rd, 32°09'S 151°27'E, 580 m (AM KS039141); 1 ♀, as previous, S of Mt Allyn Road, Allyn River Forest, N of Shellbrook Forest Rd, 32°09'S 151°28'E, 385 m, (AM KS039142); 1 ♀, Padmans Rd near intersection of Pole Dump Rd, 31°36'S 152°10'E, 730 m, NPWS Survey, 4.ii–9.iv.1993, M. Gray & G. Cassis (AM KS039409); 1 ♂, Mountain trail, 0.8 km of junction with Kunungra Rd, 32°08'S 151°45'E, 300 m, NPWS Survey, 4.ii–9.iv.1993, M. Gray & G. Cassis (AM KS039818); 1 ♂, Mountain trail, 0.8 km of junction with Kunungra Rd, 32°08'S 151°45'E, 300 m, NPWS Survey, 4.ii–9.iv.1993, M. Gray & G. Cassis (AM KS039817); 3 ♀ ♀, Westerly branch of Kunderang Station Ck, 30°48'S 152°06'E, 320 m, 4.ii–9.iv.1993, M. Gray & G. Cassis (AM KS039408); 2 ♀ ♀, Bulga SF, Homewoods Rd, 2.8 km W of Knodingbul Rd, 31°37'S 152°07'E, 690 m, NPWS Survey, 4.ii–9.iv.1993, M. Gray & G. Cassis (AM KS039410); 1 ♀, Coomerang Rd, Dampier SF, 36°06'46"S 149°59'39"E, 10.iii.1999, L. Wilkie, R. Harris, H. Smith (AM KS055884).

Other material. None.

Diagnosis. Males of this species are recognised by the retrolateral tibial apophysis in which the ventrolateral part is very large and provided with a short sharp tip pointing down; the female is easily recognised by the very wide depression behind the epigynal opening covering the entire width of the epigyne.

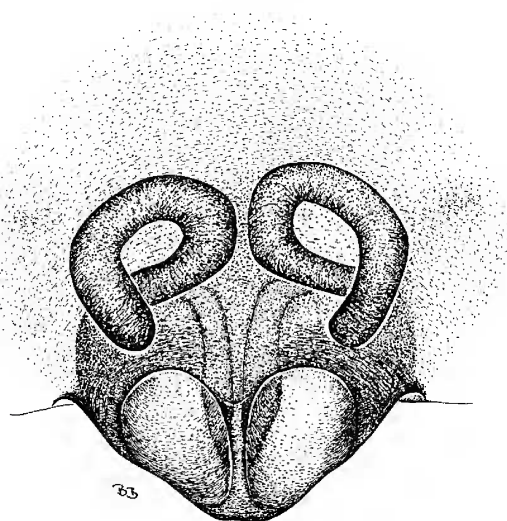
Description. *Male* (holotype): total length 2.70; carapace

1.46 long, 1.00 wide; tibia+patella I 1.16. *Colour:* carapace, chelicerae and sternum uniform orange brown; legs yellowish brown with patellae and extremities of femora and tibiae paler; abdomen: dorsum dark sepia with five white spots: one spot on either side adjacent with a narrow, pale yellow scutum, one pair in the middle and a single spot in front of the spinnerets; sides dark with two oblique stripes near the back; venter pale yellow in front of epigastric fold, pale behind it with two broad, sinuous longitudinal dark bands. Carapace and sternum with fairly coarse reticulations. *Eyes* (measurements in mm): a, 0.05; b, 0.07; c, 0.07; d, 0.08; e, 0.02; f, 0.02; g, 0.04; h, 0.08; AL–AL, 0.13. MOQ:AW = 0.66 PW; AW = 0.54 L. *Clypeus* = 0.28 mm or 4.0 times diameter of ALE; chilum double, each part 0.08 high, 0.12 wide. *Leg spination:*

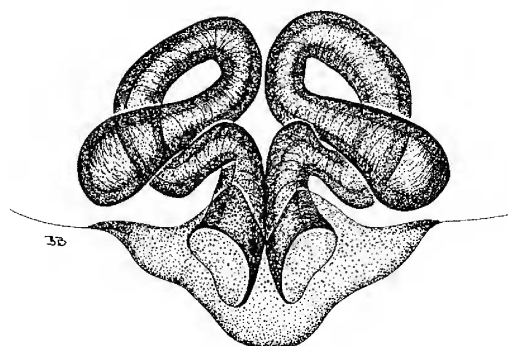
	F	P	T	Mt
I	d1	–	–	–
II	d1	–	–	v1
III	d1	pl1	pl1d2*v1	3 disp dw4
IV	d2*	pl1rl1	pl2*d2*rl2*v3*	5 disp dw5

Hinged hairs: TI d1, TII d1. *Male palp* (Figs. 21, 22): tibia with dorsolateral concavity, delimited by two retrolateral apophyses of which the ventrolateral one is very large; this explains why the concavity is rather dorsal than lateral;

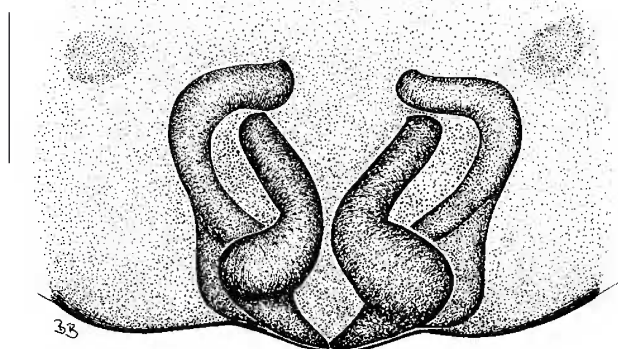
37



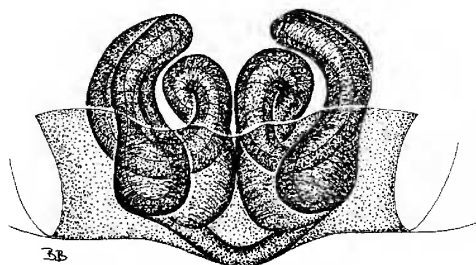
38



39



40



Figures 37–40. Epigynes, ventral view (left), dorsal view of cleared epigyne (right); 37–38, *A. biperforatum* n.sp.; 39–40, *A. grayi* n.sp. Scale = 0.1 mm.

ventrolateral apophysis with large dorsal part provided with a short sharp tip pointing down and large ventral prong pointing forward, rounded and swollen at extremity, produced under proximal part of cymbial flange; dorsal apophysis a broad transverse ridge with a prolateral macroseta; cymbium with flat flange; embolus fairly long and twisted with large, triangular basal apophysis, with strongly concave prolateral side; VTA massive and complex, its base with sharp retrolateral prong convergent with well-developed LTA; DTA membranous, with very narrow base suddenly widened into large rounded main part.

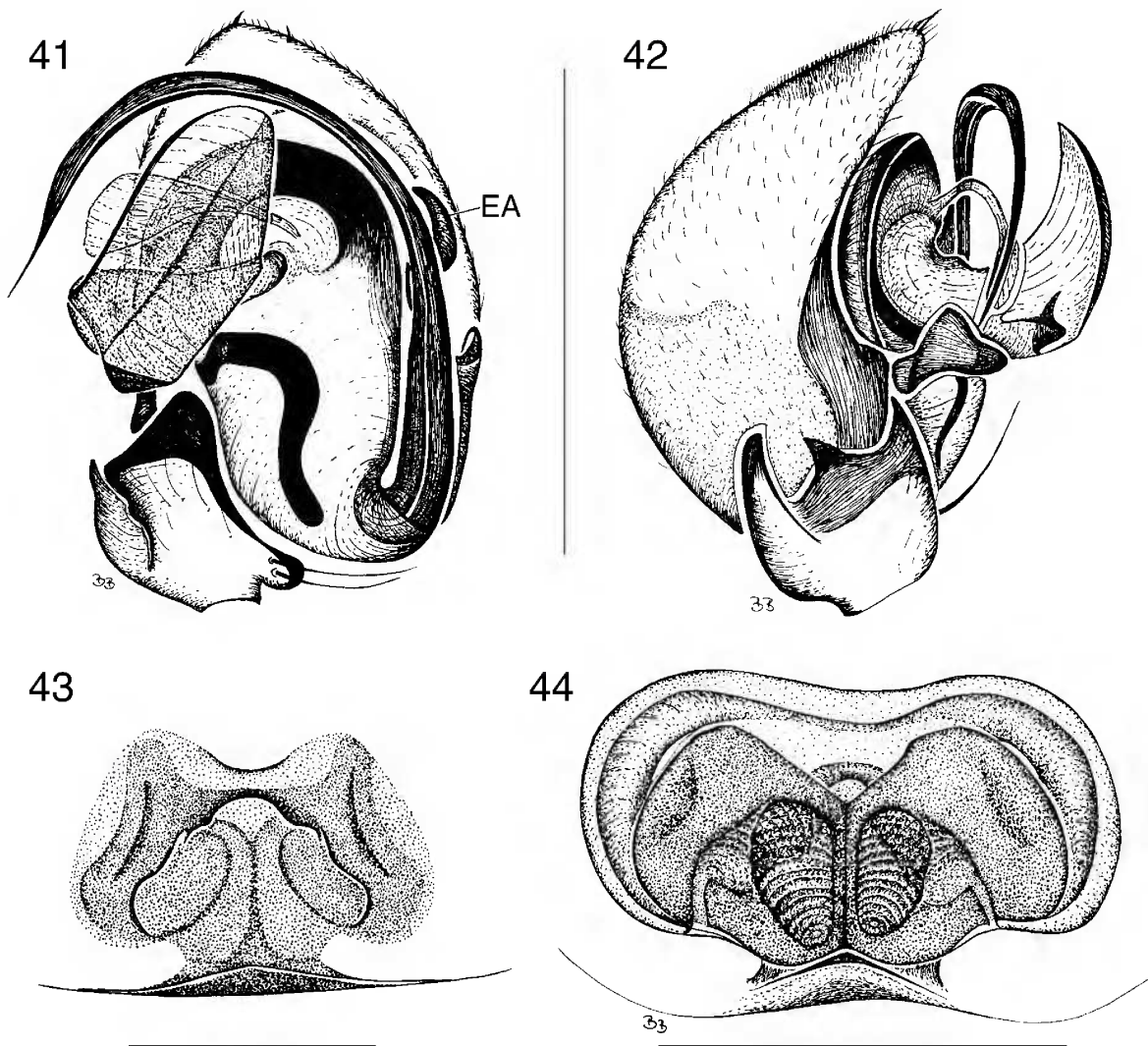
Female: total length 3.56; carapace 1.56 long, 1.02 wide; tibia+patella I 1.02. **Colour:** carapace, chelicerae and sternum uniform orange brown; legs yellowish brown with patellae and extremities of femora and tibiae paler; abdomen: dorsum dark sepia with five white spots: one pair in front, one pair in the middle and a single spot in front of the spinnerets; sides dark mottled with white, spots forming two faint oblique pale stripes near spinnerets; venter pale with broad dark central band, itself with pale, poorly delimited

spot in centre. Carapace on side with fairly coarse reticulations; sternum finely reticulated. **Eyes** (measurements in mm): a, 0.07; b, 0.10; c, 0.09; d, 0.10; e, 0.01; f, 0.03; g, 0.05; h, 0.09; AL–AL, 0.16. MOQ:AW = 0.50 PW; AW = 0.68 L. **Clypeus** = 0.28 mm or 2.8 times diameter of ALE; chilum double, each part 0.06 high, 0.22 wide. **Leg spination:**

	F	P	T	Mt
I	d1	–	–	–
II	d1	–	–	–
III	d1	–	pl2*d2*v1	4 disp dw5
IV	d1	–	pl2*d2*r12*v2*	5 disp dw5

Hinged hairs: TI d1, TII d1. **Epigyne** (Figs. 35, 36): poorly sclerotized oval area with wide depression in posterior half; epigynal opening small, central. Proximal part of copulatory ducts directed down- and forwards, thence towards the side and back towards the centre to end in poorly defined spermathecae after a final lateral loop.

Distribution. New South Wales (Fig. 45).



Figures 41–44. *Pseudasteron simile* n.gen., n.sp. 41, male palp, ventral view; 42, male palp, retrolateral view; 43, epigyne, ventral view; 44, epigyne cleared, dorsal view. Scales (mm) = 0.5 (41, 42), 0.25 (43, 44).

Etymology. The species name is a patronym in honour of one of the collectors of the type.

Asteron biperforatum n.sp.

Figs. 37, 38, 45

Type material. HOLOTYPE ♀: Australia, SE Queensland, Kenilworth SF, Sunday Creek, 9.8 km W of Charlie Moreland Park, 26°40'11"S 152°36'35"E, 6.v.1998, G. Milledge, wet sclerophyll forest (AM KS55637).

Other material. None.

Diagnosis. Females of this species are easily recognised by the paired epigynal openings whereas in the other females of the genus, the opening is single and most often hardly visible since it is often slit-shaped.

Description. *Female* (holotype): total length 3.10; carapace 1.52 long, 1.06 wide; tibia+patella I 1.12. *Colour:* carapace,

chelicerae and sternum uniform orange brown; legs yellowish brown with patellae and extremities of femora and tibiae paler; abdomen: dorsum dark sepia with five white spots: one pair in front, one pair in the middle and a single spot in front of the spinnerets; sides with two large pale spots, leaving an oblique dark stripe and some dark in front of the spinnerets; venter dark with a large rectangular spot behind the epigastric fold and a yellow sclerotized patch in front of the tracheal spiracle. Carapace on side with fairly coarse reticulations; sternum finely reticulated. *Eyes* (measurements in mm): a, 0.07; b, 0.08; c, 0.08; d, 0.09; e, 0.02; f, 0.05; g, 0.05; h, 0.09; AL–AL, 0.13. MOQ:AW = 0.70 PW; AW = 0.54 L. *Clypeus* = 0.30 mm or 3.7 times diameter of ALE; chilum double, each part 0.10 high, 0.20 wide. *Leg spination:*

	F	P	T	Mt
I	d1	–	–	–
II	d1	–	–	v1
III	d1	pl1rl1	pl2*d2*r1lv1	3 disp dw5
IV	d2*	pl1rl1	pl2*d2*r12*v3*	6 disp dw5

Hinged hairs: TI d1, TII d1. *Epigyne* (Figs. 37, 38): poorly sclerotized oval area with strongly protruding posterior rim; provided with paired epigynal openings. Proximal part of copulatory ducts funnel-shaped, strongly curved outwards and forwards, thence backwards, ending in poorly delimited spermathecae.

Male unknown.

Distribution. Known only from type locality (Fig. 45).

Etymology. The species name is an adjective referring to the openings of the epigyne.

Asteron grayi n.sp.

Figs. 23, 24, 39, 40, 45

Type material. HOLOTYPE ♂: New South Wales, Mummel Forest Rd, 8.8 km N of junction with Enfield Forest Rd, 31°16'S 151°50'E, Enfield SF, 163AS, 1350 m, 4.ii–9.iv.1993, M. Gray & G. Cassis (AM KS039147). PARATYPES: NEW SOUTH WALES: 1♂, 14♀ ♀, together with holotype (2♀ ♀ in ZSM, 2♀ ♀ in KBIN); 1♂, Bulls Ground SF nr Wauchope, 31°33'S 152°38'E, 10.ii.1991, NSW Forestry, A. York, (AM KS043360); 1♀, as previous (AM KS43369); 2♀ ♀, as previous (AM KS43367); 3♂ ♂, as previous (AM KS43362); 1♂, as previous (AM KS43358); 1♂, as previous (AM KS43359); 1♀, as previous (AM KS43366); 2♀ ♀, as previous (AM KS43364); 2♀ ♀, as previous (AM KS43370); 1♂, as previous (AM KS43357); 1♀, as previous (AM KS43365); 2♀ ♀, as previous (AM KS43368); 1♀, as previous (AM KS043371); 1♂, as previous (AM KS043356); 1♂, Bulls Ground SF, nr Wauchope, 10.ii.1995, A. York (AM KS43361); 1♂, 6♀ ♀, Barrington Tops SF, Tugalow Ck, Barrington Trail (E side of trail), 31°54'S 151°26'E, 4.ii–9.iv.1993, 1370 m, M. Gray & G. Cassis (62CG) (AM KS039174); 2♀ ♀, 1.3 km S along Bungaree Trail from Barrington Tops Forest Road, 31°56'S 151°21'E, SF 1180 m, 4.ii–9.iv.1993, M. Gray & G. Cassis (KS039173); 1♂, 1.9 km W along Sheas Nob Rd from Boundary CK Rd, 29°59'S 152°34'E, Boundary Creek State Forest 550, 4.ii–9.iv.1993, M. Gray & G. Cassis, (KS039043); 1♀, 1 km E of main road, 28°49'S 152°11'E, Boorook SF, 163A 900, 4.ii–9.iv.1993, M. Gray & G. Cassis, (AM KS036310); 1♂, 0.4 km S along Barrington Trail from southern Green Gap turnoff, 31°56'S 151°26'E, Stewarts Brook SF, 1460 m (NPWS Survey), 4.ii–9.iv.1993, M. Gray & G. Cassis, (KS039042); 5♀ ♀, Double Dumps Fire trail, 700 m off Daisy Patch Rd, 31°20'S 151°54'E, Enfield SF, 1080 m, 4.ii–9.iv.1993, M. Gray & G. Cassis (KS039148); 1♂, 1♀, 0.25 km S of junction Turbrabucca & Omadale Brook Roads, 31°54'S 151°23'E, Stewart SF, 1290 m, NPWS Survey, 4.ii–9.iv.1993, M. Gray & G. Cassis (KS039172); 1♀, NE facing slope above Kunderang Station Ck, 30°48'S 152°06'E, 410 m, NPWS Survey, 4.ii–9.iv.1993, M. Gray & G. Cassis (KS039150); 1♀, 45BM Farnell Fire Trail, ca. 1.2 km N of junction with Upper Rocky River, Fire Trail, 29°20'S 152°09'E, Spirabo SF, 1110 m, 4.ii–9.iv.1993, M. Gray & G. Cassis (KS036287); 1♀, North West Fire Trail, 29°27'S 152°16'E, Washpool NP, 950 m, 4.ii–9.iv.1993, M. Gray & G. Cassis (KS036421); 1♀, Daisy Patch Fire Trail, 1.9 km S of Enfield Rd, 31°20'S 151°54'E, Enfield SF, 1130 m, 4.ii–9.iv.1993, M. Gray & G. Cassis (AM KS039175); 6♀ ♀, W of junction Thunderbolts Track & Devils Hole Track, 31°54'S 151°28'E, Barrington Tops SF, 1420 m, 4.ii–9.iv.1993, M. Gray & G. Cassis, (KS039176); 1♀, 0.7 km W. along unnamed logging track from Omadale Brook Rd, 31°54'S 151°23'E, Stewarts Brook SF, 1250 m, NPWS Survey, 4.ii–9.iv.1993, M. Gray & G. Cassis (AM KS039485); 1♂, Bulls Ground SF, nr Wauchope, 10.ii.1991, A. York, M. Gray (AM KS043363); 1♀, Booti Booti NP, 13.vii.1996, L. Wilkie & R. Harris (AM KS50446); 1♀, Slave Cave, Doline via Wellarawong, 33°24'S 150°00'E, 20.v.1994, J. Moss & G.S. Hunt (AM KS45492); 1♀, Dodds Fire Trail, 1 km from Enfield Rd, 31°23'S 151°53'E, Enfield Sate Forest, 1050 m,

4.ii–9.iv.1993, M. Gray & G. Cassis (AM KS039149); 1♀, Belowra Rd, Dampier SF, 36°09'28"S 149°50'20"E, 10.iii.1999, J. Tarnawski, S. Lassau (AM KS55902); 1♀, Turtle Creek Fire Trail, Monga SF, 35°38'20"S 149°55'51"E, 15.iii.1999, L. Wilkie, R. Harris, H. Smith (AM KS55903).

Other material. None.

Diagnosis. Males of this species are recognised by the shape of the dorsolateral tibial apophysis which is large and ear-shaped, appearing as spine-shaped with parallel margins in lateral view, and by the LTA which has a straight, sharp tip, pointing outwards in ventral view. Females may be recognised by the epigyne provided with a diamond-shaped, pale central area just in front of posterior margin.

Description. *Male* (holotype): total length 2.82; carapace 1.38 long, 0.94 wide; tibia+patella I 1.06. *Colour:* carapace and chelicerae uniform medium; sternum reddish brown; legs uniform yellowish brown; abdominal pattern: dorsum dark sepia with five white spots: one spot on either side adjacent with a narrow, brownish scutum, one pair in the middle and a single spot in front of the spinnerets; sides dark with several oblique pale stripes; venter with two large lateral and one smaller central pale spots behind epigastric fold and yellowish area, covering tracheal spiracle. Carapace and sternum with fairly coarse reticulations. *Eyes* (measurements in mm): a, 0.06; b, 0.06; c, 0.07; d, 0.08; e, 0.02; f, 0.03; g, 0.04; h, 0.08; AL–AL, 0.14. MOQ:AW = 0.77 PW; AW = 0.70 L. *Leg spination:*

	F	P	T	Mt
I	d1	–	–	–
II	d1	–	–	v1
III	d1	pl1rl1	pl2*d2*v1	3 disp dw5
IV	d2*	pl1rl1	pl2*d2*rl2*v2*	5 disp dw5

Hinged hairs: TI d1, TII d1. *Male palp* (Figs. 23, 24): tibia with very shallow retrolateral concavity, delimited by two apophyses: ventrolateral apophysis pointing forward, blunt, produced under proximal part of cymbial flange, dorso-lateral one large, ear-shaped as seen from in front, appearing as parallel-shaped spine in lateral view; cymbium with flat flange, its inferior margin clearly concave; embolus and VTA as in other species; LTA short, appearing as short, straight spine in ventral view; DTA membranous, roughly triangular: strongly widened from narrow base.

Female (paratype): total length 2.92; carapace 1.36 long, 0.96 wide; tibia+patella I 0.98. *Colour:* as in male except for absence of dorsal abdominal scutum and pale central spot behind epigastric fold, smaller thus forming a continuous central dark band provided with a series of small pale spots. Carapace and sternum reticulated. *Eyes* (measurements in mm): a, 0.06; b, 0.06; c, 0.07; d, 0.08; e, 0.02; f, 0.03; g, 0.04; h, 0.08; AL–AL, 0.15. MOQ:AW = 0.77 PW; AW = 0.70 L. *Leg spination* and *hinged hairs* exactly as in male. *Epigyne* (Figs. 39, 40): a poorly sclerotized oval area with dark curved copulatory ducts clearly visible under cuticle leaving a diamond-shaped pale area just in front of posterior margin.

Variation. Colour pattern fairly stable, but venter variable in the amount of white; spination stable; male carapace length and width vary between 1.34 and 1.44, 0.93 and 0.97;

female carapace between 1.32 and 1.41, 0.93 and 0.99.

Distribution. Known only from New South Wales (Fig. 45).

Etymology. The species name is a patronym in honour of the collector of the type.

Pseudasteron n.gen.

Diagnosis. The genus is closely related and similar to *Asteron*; the main differences of *Pseudasteron* are that it has: AME touching, chilum single, carapace entirely reticulated, abdominal scutum fairly large in males. Some male palpal characters are also diagnostic: ventrolateral tibial apophysis bifid; embolus ribbon-shaped and with fairly large, curved apophysis.

Description. Small spiders (2.50–3.00) with reticulated tegument. Carapace entirely reticulated (Fig. 9) at its widest between coxae II and III, narrowed to 0.65 maximum width in females, to about 0.55 maximum width in males. Profile domed with highest point between fovea and PME. *Colour:* carapace, chelicerae and sternum medium brown; legs orange; abdomen dark grey with five pale spots; in male provided with dark sepia, fairly wide scutum in anterior half. Eyes in two strongly procurved rows, resulting in (2–4–2) situation, PLE situated level with PME. All eyes subequal, circular, and pale, only AME dark. AME touching and about less than half the radius from PME which are slightly larger. ALE twice their diameter apart. MOQ longer than wide and narrower in front than at the back. Clypeus slightly convex and retreating; about 3 times the diameter of an ALE; with few hairs. Chilum a single triangular sclerite, slightly wider than long, without hairs. Chelicerae with a few hairs in front and a dense row on distal promargin; no teeth. Labium narrowed at base; sparsely haired. Gnathocoxae rather elongate; sparsely haired; with anteromesal scopula. Sternum fairly flat, triangular with straight anterior margin and slight triangular extensions between coxae. No inter- nor precoxal sclerites. *Legs:* formula 4 1 2 3. Spination: few spines on pairs I and II, more numerous on III and IV. Tarsal claws with approximately 14 teeth on those of first leg pairs, with only about 7 teeth on those of legs III and IV. Single claw on very small onychium. Trichobothria in two rows on T and in a single row on Mt and t. No hinged hairs in male, only on TI and II in female. Metatarsal preening brush poorly developed, composed of chisel-shaped hairs. *Abdomen:* oval; with two sigilla; in the male with fairly large dorsal scutum in anterior half and with poorly developed epiandrium. Tracheal spiracle narrow without sclerotized area in front. Spinnerets as usual in the family; posterior pairs smaller in males than in females. Colulus represented by few hairs. *Male palp:* tibia with a frontolateral concavity delimited by dorsolateral and ventrolateral apophyses; dorsal one usually flat, ventral one strong, bifid, embracing cymbial flange. Embolus long, ribbon-shaped with large, folded, retrolateral apophysis at base, VTA large, flat; DTA membranous, fan-shaped; LTA short. *Epigyne:* poorly sclerotized showing strong copulatory ducts under cuticle; epigynal openings rounded and slit-shaped; copulatory ducts with fairly constant trajectory, leading to widely separated, poorly delimited spermathecae. *Female palp* with slender,

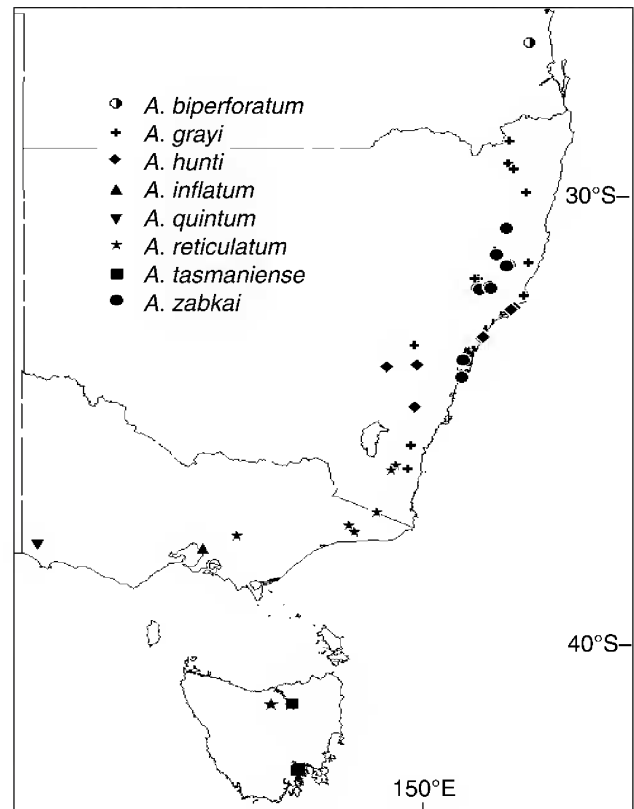


Figure 45. Southeastern Australia showing collecting localities of *Asteron* species.

conical tarsus with spines on prolateral and ventral sides. Finely dentate tarsal claw turned inward over $\pm 30^\circ$.

Distribution. Queensland.

Type species. *Pseudasteron simile* n.sp.

Pseudasteron simile n.sp.

Figs. 3, 4, 9–12, 14, 41–44, 46

Type material. HOLOTYPE ♂: SE Queensland: Braemar SF, 15–19.x.1979 27°13'S 150°50'E, litter funnel extraction, R. Raven (QM S3854). PARATYPES: QUEENSLAND: 3 ♀ ♀, SE Qld, together with holotype; 3 ♂ ♂, 7 ♀ ♀, Lake Broadwater, via Dalby, pitfall site 8, 17.v–24.xi.1985, QM & M. Bennie (QM S15734; 1 ♂, 1 ♀ in ZSM); 1 ♂, 2 ♀ ♀, Braemar SF, 27°13'S 150°50'E, 18.x.1979, open woodland, sifted litter, G. Monteith (QM S4282); 3 ♀ ♀, Braemar SF, 4–8.ii.1980, R. Raven (QM S4246); NE Qld: 1 ♂, Tooloombah Ck, 22°42'S 149°34'E, 29.vii–24.xi.1992, pitfalls, R. Raven, P. & E. Lawless, M. Shaw (QM S24518); 1 ♂, as previous (QM S24502); 1 ♀, Tooloombah Ck, 22°42'30"S 149°34'E, 29.vii–24.xi.1992, dry *Acacia/Eucalyptus* woodland, QM Pitfall NQ41, Raven, Lawless & Shaw (QM S24638); 1 ♀, SE Qld, Expedition Ra NP, "Amphitheatre" camp, 25°12'S 148°59'E, 18.xii.1997–5.iii.1998, 560 m, open forest pitfall, Cook & Monteith (QM S33364); 2 ♂ ♂, SE Qld, Hamphery Racetrack, 25°38'S 151°30'E, 11.x–18.xii.1998, 140 m, pitfall 7519, Monteith & Gough (QM S47509); 1 ♀, central Qld, Moranbah, 5 km S, 240 m, 22°02'S 148°03'E, 20.xii.1997–26.iv.1998, pitfall trap 5798, Bendee Scrub, G.B. Monteith (QM S47510); 2 ♀ ♀, SE Qld, Binjour, Redvale Rd, 340 m, 25°33'S 151°28'E, 20.xii.1997–26.iv.1998, open forest, flight intercept, 5795, G.B. Monteith (QM S47511); 1 ♂, NE Qld, Moranbah, 5 km S, 22°02'S 148°03'E, 25.vi–20.xii.1997, intercept, Bendee Scrub,

5642, Monteith & Kruck (QM S47512); 1 ♀, NE Qld, Davies Creek NP, 17°00'S 145°34'E, 29.x.1991–23.vii.1992, pitfall NQ8, P. Lawless, R. Raven & Shaw (QM S22705); 2 ♂♂, 5 ♀♀, as previous (QM S22730); 2 ♂♂, 2 ♀♀, as previous (QM S25149); 11 ♂♂, 19 ♀♀, as previous but collected 26.xi.1992–15.iv.1993 (QM S19782; 2 ♂♂, 2 ♀♀ in ZSM; 2 ♂♂, 2 ♀♀ in KBIN).

Other material. None.

Diagnosis. The species is recognised by the uniform colour and the poorly spined legs; the male is characterised by the large dorsal embolar apophysis; the female by the transverse, curved plate in the anterior part of the epigyne, in front of the shallow central depression connecting the openings.

Description. *Male* (holotype): total length 2.60; carapace 1.35 long, 0.93 wide; tibia+patella I 0.96. *Colour:* carapace, chelicerae and sternum uniform orange. Legs pale yellow. Abdomen: dark sepia with some pale mottling. Dorsum with fairly large scutum in anterior half; 5 pale spots, the second pair merging with pale lateral sides; these provided with three oblique stripes in posterior half. Venter pale with four dark spots: two just behind epigyne, two in the middle. Carapace finely granulated; sternum not granulated. *Eyes* (measurements in mm): a, 0.06; b, 0.08; c, 0.07; d, 0.06; e, 0.00; f, 0.02; g, 0.04; h, 0.08; AL–AL, 0.12. MOQ:AW = 0.66 PW; AW = 0.60 L. Chilum single, 0.11 wide, 0.07 high. *Leg spination:*

	F	P	T	Mt
I	d1	–	–	–
II	d1	–	–	–
III	–	pl1	pl1d2v1	dw4
IV	d2	pl1rl1	pl2d2rl2v1–1	4 disp dw5

No hinged hairs. Metatarsi I and II fusiform. *Male palp* (Figs. 41, 42): tibia with two retrolateral apophyses delimiting concavity; dorsal apophysis complex well developed, blunt; ventrolateral one broad with concave anterior edge, sharp dorsal tip, ventral part folded around cymbial flange. Cymbium short with well-developed short flange. Embolus originating on posterior rim of tegulum; proximal part straight and directed forwards, distal part semicircular; long embolar apophysis with distal part twisted and wrapped around embolus. VTA large, foliate, sclerotized but translucent. DTA narrow and membranous.

Female (paratype): total length 2.86; carapace 1.35 long, 0.96 wide; tibia+patella I: 0.88. *Colour:* exactly as in male. *Eyes:* exactly as in male. Chilum single, 0.12 wide, 0.08 high. *Leg spination:*

	F	P	T	Mt
I	d1	–	–	–
II	d1	–	–	–
III	–	pl1	pl1d2rl1v1	dw5
IV	d2	pl1rl1	pl2d2rl2v1–1	4 disp dw5

No hinged hairs. Tarsi I and II cylindrical. *Epigyne* (Figs. 14, 43, 44): with frontal margin anterior to epigynal openings and slightly convex. Spermathecae close together.

Variation. Colour pattern and size stable; male carapace length and width vary between 1.27 and 1.35, and 0.91 and 0.94; female carapace between 1.22 and 1.38, 0.83 and 0.96.

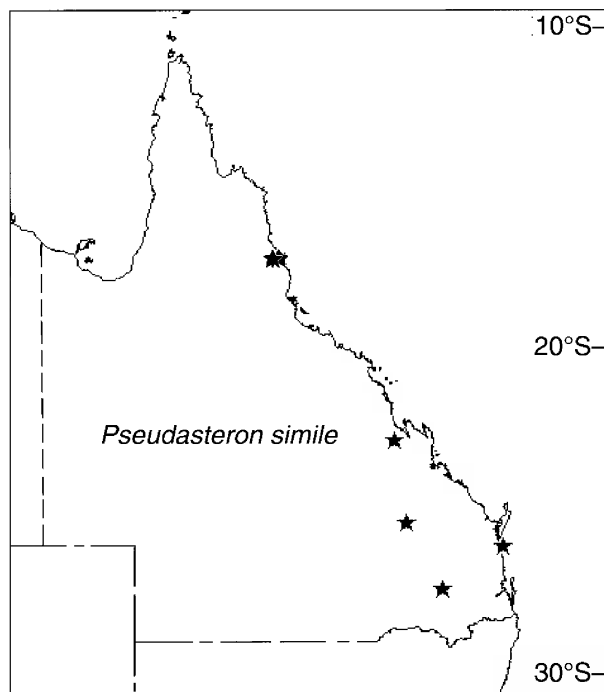


Figure 46. Queensland, showing collection localities of *Pseudasteron simile*.

Distribution. Known from southern and central Queensland (Fig. 46).

Etymology. The name refers to the superficial similarity (Latin: *similis* = similar) of the species with the type species of *Asteron* to which this species was originally thought to belong.

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